

## TOUCH SCREEN APPARATUS AND METHOD

### Abstract of the Disclosure

In a method for determining a position of a touch on a touch screen, a first sinusoidal signal is provided to an electrode on a touch screen, the first sinusoidal  
5 signal having a frequency. A signal flowing from the first electrode is sensed to generate a sensed signal, and the sensed signal is multiplied by a second sinusoidal signal to generate a first multiplied signal, the second sinusoidal signal having the frequency, the second sinusoidal signal having a phase. The first sensed signal is also multiplied by a third sinusoidal signal to generate a second multiplied signal, the third  
10 sinusoidal signal having the frequency, the third sinusoidal signal having a phase different from the phase of the second sinusoidal signal by 90 degrees. The first multiplied signal is filtered to generate a first filtered signal, and the second multiplied signal is filtered to generate a second filtered signal. An estimated touch position is generated based on the first filtered signal and the second filtered signal.

15